HINDSIGHT

TEAM CTP

. Complete . Total . Package .

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11/14/13

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EXECUTIVE SUMMARY

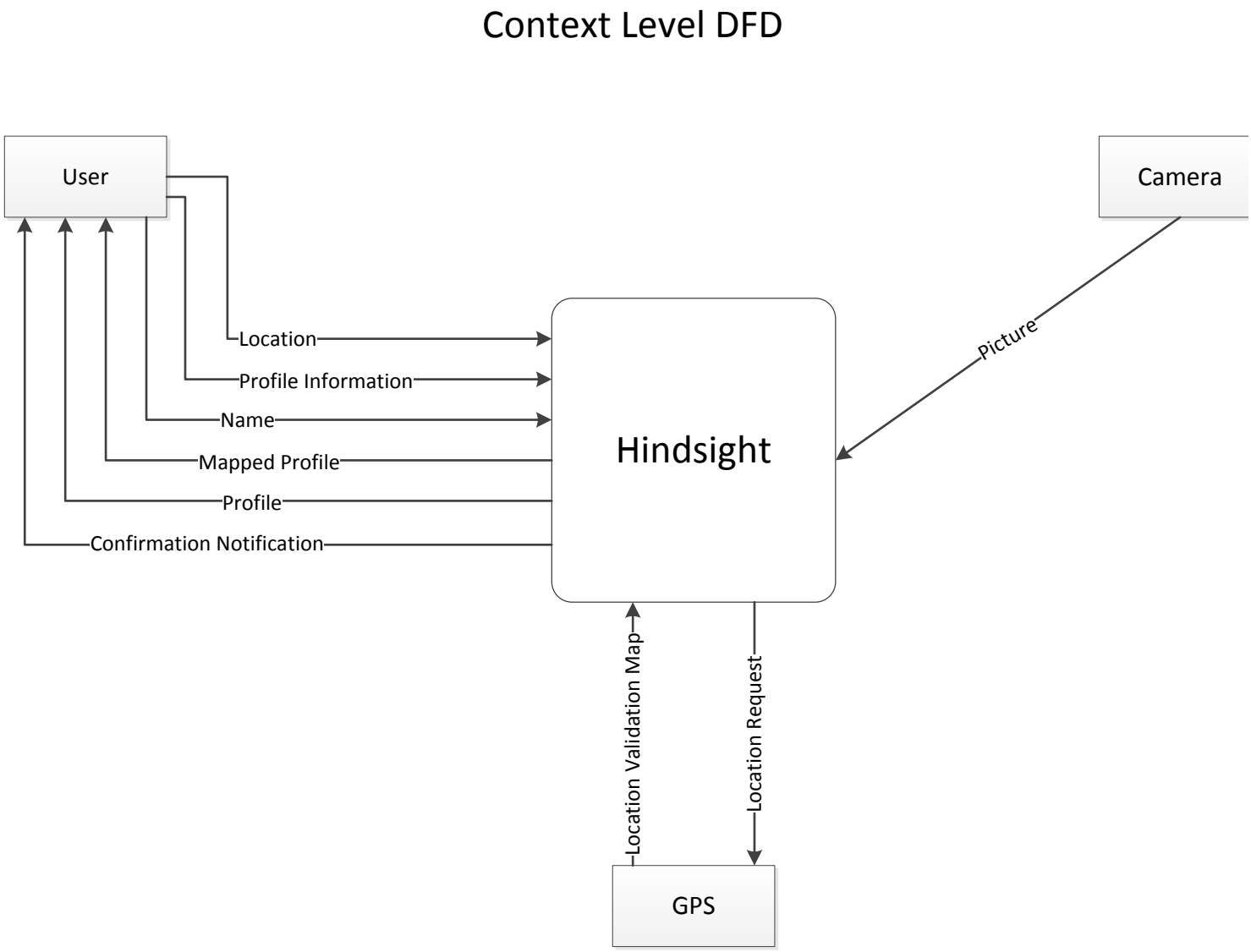
By Peter Mella

The Hindsight application will serve as an external hard drive of relational memories for Alzheimer's patients in the beginning and intermediate stages of the disease. The application will store and manage profiles of people of interest for the patient. The application will be a repository for pertinent information regarding family, friends, and acquaintances. Its main functions will include creating/storing profiles, logically retrieving profiles, and tracking GPS locations.

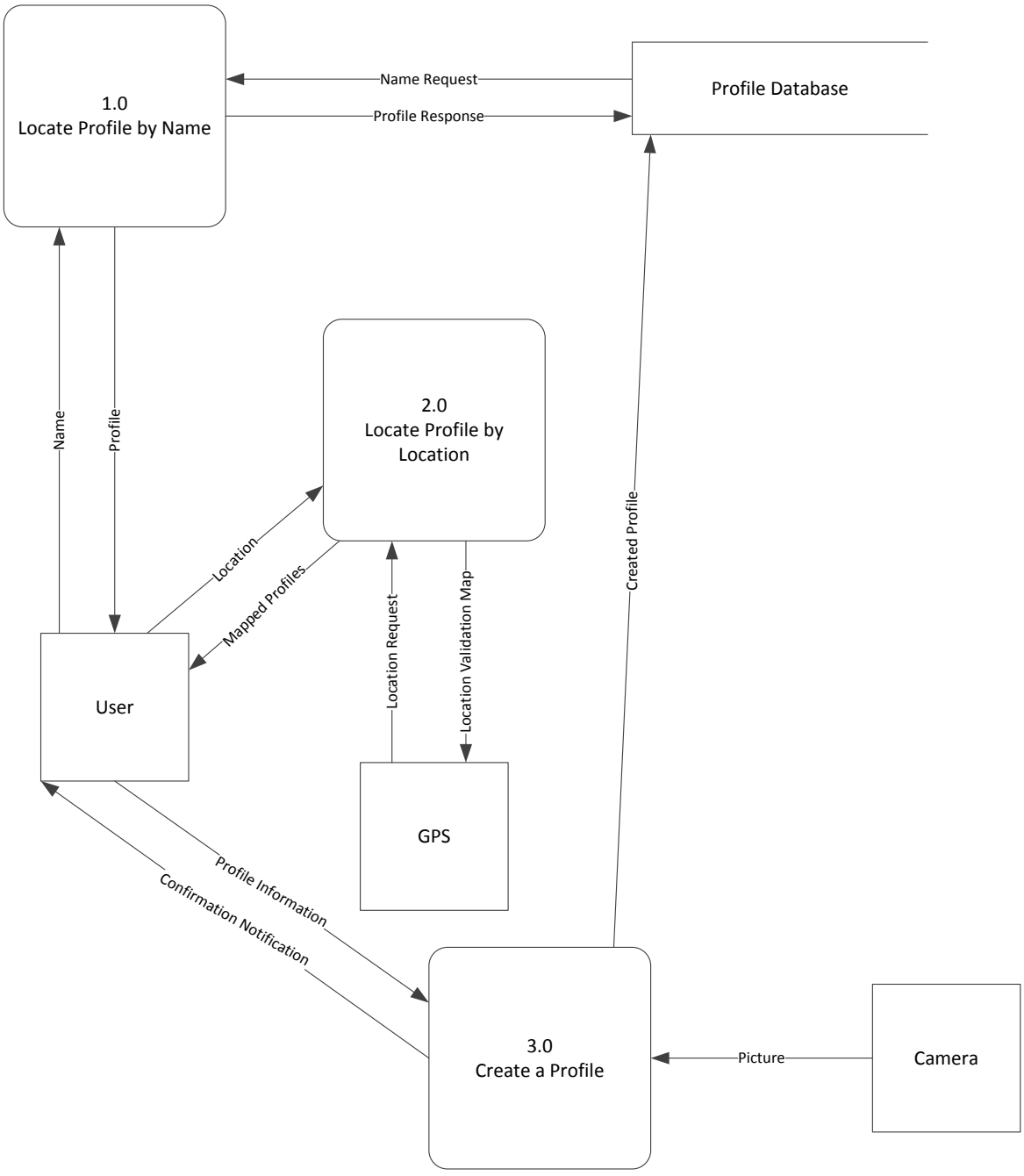
The target audience for this application will be Alzheimer's patients within the intermediate threshold of the condition. These patients have not suffered complete loss of memory; instead they struggle with the recall of relationships they possess with others around them. This application suits the needs of these patients by assisting in the process of recall and serving as an objective third party that can answer questions previously only answerable by those close to the patient. The patient no longer needs to suffer the fear, anxiety, or embarrassment of asking others to recollect memories of close family and friends.

Alzheimer's patients are often dependent on others, especially paid nurses and caretakers to assist them with the mental process of recall on a daily basis. The cost incurred just for this privilege alone is staggering. Patients who simply need a caretaker because their memories need jogging on a daily basis (not assistance with activities of daily living) can receive the same assistance from Hindsight. This application hopes to drastically reduce the care and cost needed by these patients by acting as a functioning human memory that can logically and preemptively recall profiles of family, friends, and acquaintances. If this application serves the purpose it is designed for then it could essentially act as a prosthetic memory, much the same way an artificial heart can pump blood in the stead of an actual human heart.

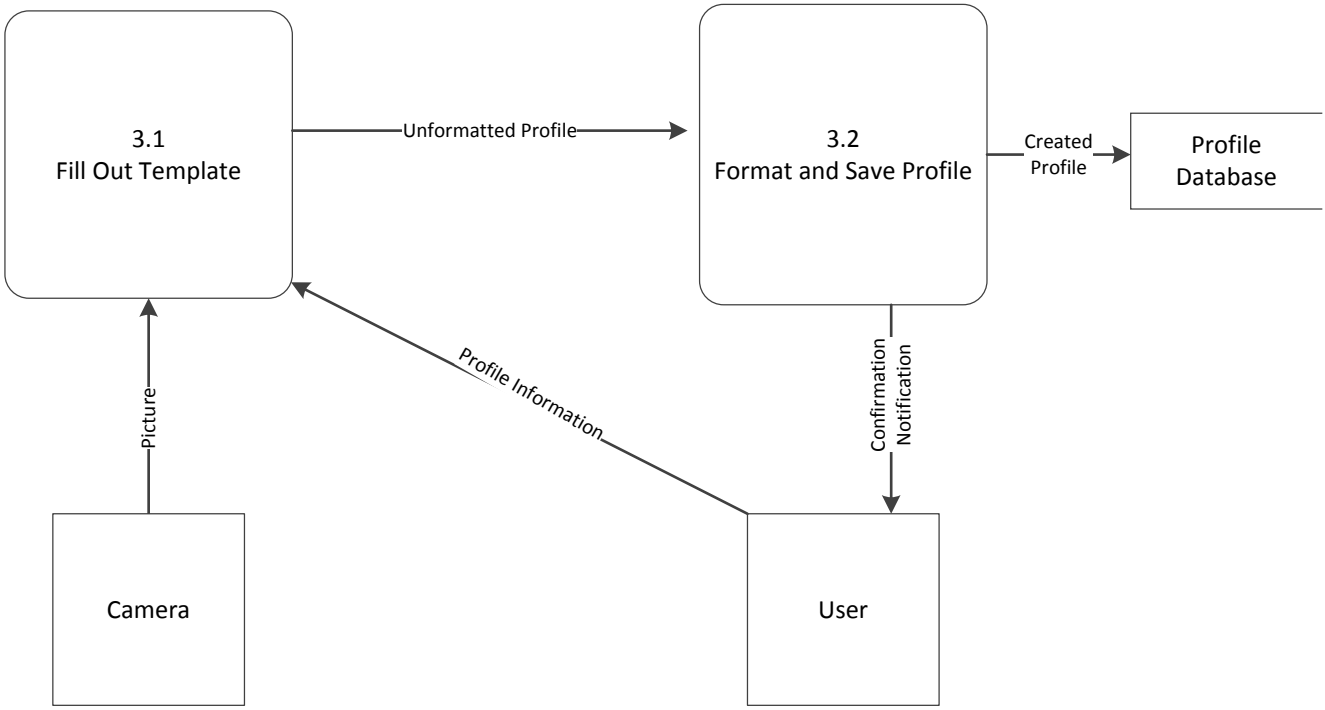
The application will at its core be able to create and store profiles containing pertinent personal information of persons related in some way to the user. Manual creating of the profile will be accomplished by filling out a template based on the relationship of the profile to the user (family, friend, or acquaintance). The user will create profiles manually. The second half of the applications functionality will involve retrieval of profiles. This retrieval can be accomplished manually by searching by name, or by geographical location. The geographical location option represents an unprecedented take on artificial memory recollection. This feature will (with the consent of all users) track in real time the location of the user and all profiles. When the user becomes within a certain distance of a profile, the application will preemptively retrieve the profile and alert the user of their presence. In essence, this feature will serve as the mental function destroyed by the disease. No matter where the user is, the user will be informed ahead of time and never be confused about who they are about to meet as long as both parties comply to allow the tracking of their locations.


Context Level DFD
User
Camera
Location
Profile Information
Name
Mapped Profile
Profile
Confirmation Notification
Hindsight
Picture
Location Validation Map
Location Request
GPS

LEVEL 0 DFD


1.0
Locate Profile by Name
Name Request
Profile Response
Profile Database
Name
Profile
2.0
Locate Profile by
Location
Location
Mapped Profiles
Location Request
Location Validation Map
Created Profile
User
GPS
Profile Information
Confirmation Notification
3.0
Create a Profile
Picture
Camera

Level 1 DFD


3.1
Fill Out Template
Unformatted Profile
3.2
Format and Save Profile
Created
Profile
Profile
Database
Picture
Profile Information
Confirmation
Notification
Camera
User

Hindsight

PREPARED BY: CTP

Statement of Project Scope

Date: September 29, 2013

General Project Information

Project Name: Hindsight

Project Management: Armand Link, Becki Meinhold, Peter Mella, Andrew Riecke, Sloan Tison

Problem/Opportunity Statement

In intermediate stages of Alzheimer's, the inability to recall someone or their relationship to them is accompanied by feeling of fear and feelings of embarrassment when inevitably forced to ask someone to remind them. Users will choose this app to quickly and discreetly aid the recall process.

Project Objectives

This app is designed to have three main functions. The first function allows users to store profiles containing a person's name, a photo of them, and other important information regarding that person. The other important information will include the person's current location and the connection to the user as well as how each profile is connected to other previously stored profiles. The second function enables the profile to be created in one of two ways; the user can fill out the profile manually or use the newly devised auto fill feature. The auto fill feature uses the name the user provides to search social media and automatically creates a profile for that person. The third and final function allows the user to summon the previously stored information and have it displayed in front of them by text query, voice command search, location search, or facial recognition via the phone's camera.

Project Description

HINDSIGHT will serve as an "external hard drive" for the memories of families, friends, and acquaintances. The application will be a mobile app with optional internet connectivity. Its main task is to store profiles containing relevant personal information in order to be accessed by the user as a means of memory recall assistance. A single profile will contain a photo of the individual as well as pertinent personal information.

Special emphasis will be placed on the relationship between the user and the individual. The application will not only store profiles, it will also record and make logical connections between profiles to help organize the profiles more effectively. A common surname would group profiles into a family unit and when viewing a profile of one member, the application would suggest the profiles of others within that profile's immediate family. That family unit could also be displayed as a family tree. Geographical location would also be used to group profiles. With the internet enabled, the application could store the location where the profile(s) were created and group profiles by a specific location. If a user frequented a particular drug store and lost recall of the friendly clerk, the user could search something to the effect of "Drug Store" and the clerks profile could be retrieved in that manner. In addition, the GPS feature would allow the application to preemptively retrieve

profiles. If the user were approaching the drug store, the application could pull up the profile of the friendly clerk and notify the user without the need for searching.

Taking the GPS feature one step further, with the consent of individuals stored in profiles, HINDSIGHT could track locations of both the profile and the user in order to preemptively retrieve profiles. The app would alert the user through sound or vibration, and inform the user of who they are about to meet as their locations converge in real time.

Business Benefits

HINDSIGHT represents a new way to assist individuals suffering from mild to moderate Alzheimer's. Memories of loved ones and friends are never completely lost, it is the ability to recall these memories that is the problem. This application could externalize a person's memory bank and memory retrieval system; essentially performing the tasks that the disease has taken away from them.

Project Deliverables

Functional Requirements

1.0 The system will allow the user to find a profile by name.
- 1.1 The system will allow users to display a profile
- 1.2 The system will allow users to display map with pictures
  - 1.2.1 Users may select a picture.
  - 1.2.2 Users may display profile.

2.0 The system will allow the user to find a profile by location.
- 2.1 Users can display a map of a location near them.
- 2.2 Users can display a profile from the map of the location near them.
- 2.3 Users can publish profiles to the map of the location near them.

3.0 The system will allow the user to create a profile.
- 3.1 Fill out template.
- 3.2 Format and save profile.

Completion Dates

MILESTONE 1 – October 2, 2013

MILESTONE 2 – October 22, 2013

MILESTONE 3 – November 14, 2013

Functional Requirements:

1.0 Speak a name or location.

- 1.1 The system will allow users to display a profile
- 1.2 The system will allow users to display map with pictures
  - 1.2.1 Users may select a picture.
  - 1.2.2 Users may display profile.

2.0 Find profile by location

- 2.1 Users can display a map of a location near them.
- 2.2 Users can display a profile from the map of the location near them.
- 2.3 Users can publish profiles to the map of the location near them.

3.0 Create a profile

- 3.1 Fill out template.
- 3.2 Format and save profile.

Non-Functional Requirements:

1.0 Operational

- 1.1 The system can run on mobile devices.
- 1.2 The system will notify the user that their submission was successful.
- 1.3 The system will utilize the mobile device's camera and keyboard.

2.0 Performance

- 2.1 Responses from the system should not exceed five seconds.
- 2.2 Optimal usage should not exceed 200 profiles.

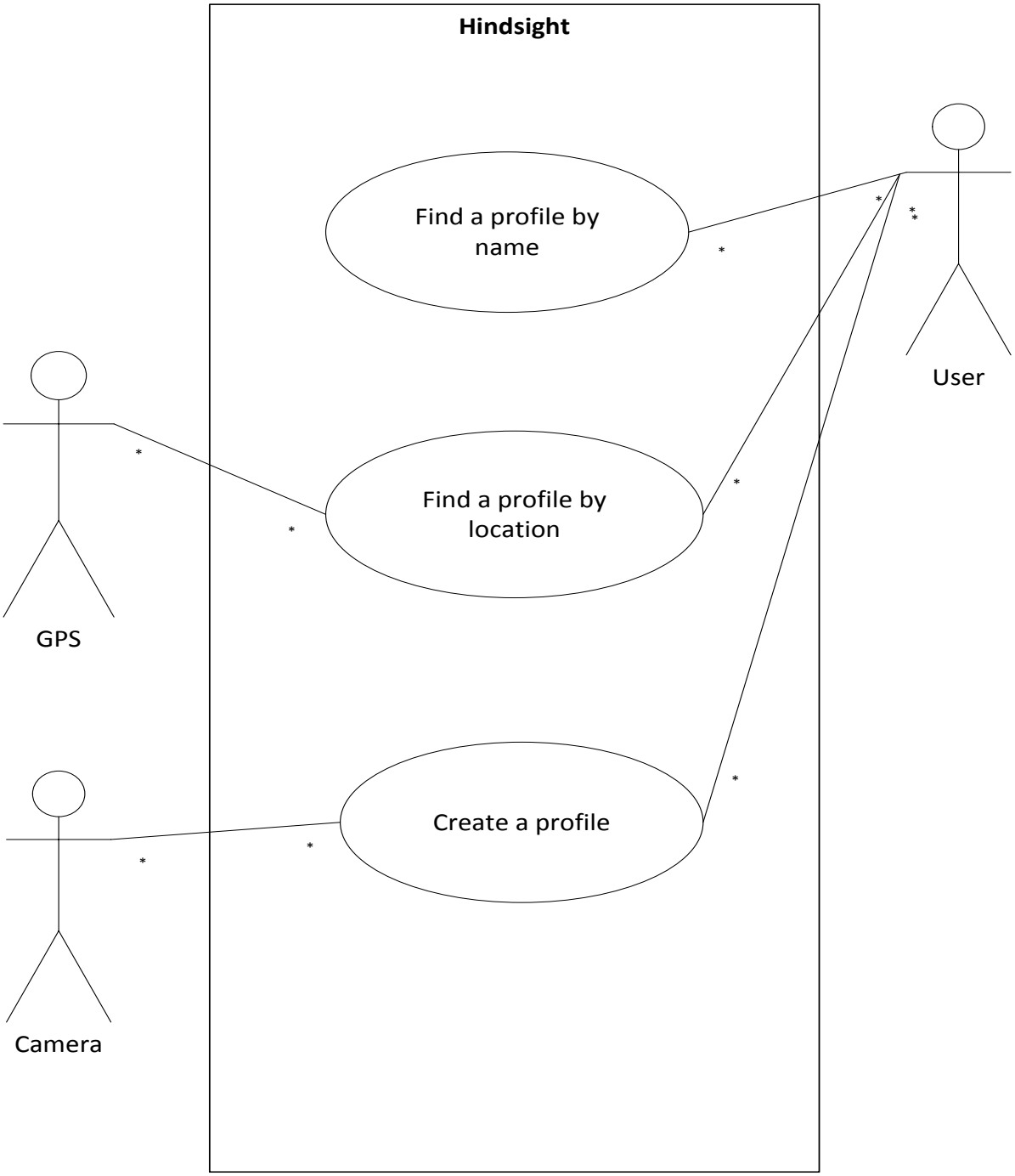
3.0 Security

- 3.1 The system will utilize the security of the mobile device.

4.0 Cultural and Political

- 4.1 No special cultural and political requirements are required.

USE CASE DIAGRAM



My Rolodex

Author (s): ___CTP_____ **Date:** _10/17/13_____

USE CASE NAME:	**Find profile by name**	
PRIMARY BUSINESS ACTOR:	User	
OTHER PARTICIPATING ACTORS:	None	
DESCRIPTION:	The use case describes the event of an Alzheimer's patient speaking or manually entering a name to display a profile.	
PRE-CONDITION:	Smart Phone with Application Installed and Open	
TRIGGER:	Manually enter in a name	
TYPICAL COURSE OF EVENTS:	**Actor Action**	**System Response**
	Step 1: User types in name	**Step 2**: The system receives the name and looks it up in the database
		Step 3: Database sends back profile information
		Step 4: The system sends the profile to the user.
ALTERNATE COURSES:	**Step 3A**: When the application cannot find the profile	
	Step 4A: The error message "Cannot Find Profiles" will be sent	
CONCLUSION:	When either profiles or error message is displayed	
POST-CONDITION:	None	
BUSINESS RULES	Cannot type in name longer than 50 characters into search box	
IMPLEMENTATION CONTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	
CORRESPONDING FORMS AND REPORTS:	Introduction Screen	

My Rolodex

Author (s): ___CTP_____ **Date:** _10/17/13_____

USE CASE NAME:	**Find a Profile by Location**	
PRIMARY BUSINESS ACTOR:	User	
OTHER PARTICIPATING ACTORS:	None	
DESCRIPTION:	The use case describes the event of an Alzheimer's patient to display a profile near them, find a profile near them, and publish profiles to the map.	
PRE-CONDITION:	Smart Phone with Application Installed and Open	
TRIGGER:	Speak a name or type in a location	
TYPICAL COURSE OF EVENTS:	**Actor Action**	**System Response**
	Step 1:User enters location	**Step 2**: The system receives the location and looks it up in the database
		Step 3: Database sends back profiles located in area
		Step 4:The system sends profiles and maps to user
ALTERNATE COURSES:	**Step 3A**: When database finds no profiles for the location	
	Step 4A: The error message "Cannot Find Profiles" will be sent	
CONCLUSION:	When either profiles or error message is displayed	
POST-CONDITION:	None	
BUSINESS RULES	Cannot enter location longer than 50 characters into search boxes	
IMPLEMENTATION CONTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	Ability to tap between profiles on map coming in release 2.0.	
CORRESPONDING FORMS AND REPORTS:	Location Screen	

My Rolodex

Author (s): CTP_____ **Date:** 10/17/13_____

USE CASE NAME:	**Create a Profile**	
PRIMARY BUSINESS ACTOR:	User	
OTHER PARTICIPATING ACTORS:	Camera	
DESCRIPTION:	The use case describes the event of an Alzheimer's patient taking a picture, selecting a relationship, entering a name, including details, and adding a picture.	
PRE-CONDITION:	Smart Phone with Application Installed and Open	
TRIGGER:	Tapping the create a profile icon	
TYPICAL COURSE OF EVENTS:	**Actor Action**	**System Response**
	Step 1: User taps create a profile icon	**Step 2**: System responds with blank profile screen
	Step 3: User Fills out the profile and clicks done	**Step 4:** System receives profile information and updates database
	Step 5: Displays the new profile to the User with camera icon activated	**Step 6**: User takes the picture and camera sends image to system
	Step 7: Receives picture and updates the database	**Step 8**: Displays profile with the picture
ALTERNATE COURSES:	**Step 4A**: If profile already exists, system will send error message	
	Step 6A: If no one is available for picture, what should we do?	
CONCLUSION:	Displays profile with the picture	
POST-CONDITION:	Profile is ready to be used	
BUSINESS RULES	User is limited to drop down box choices Cannot enter name longer than 50 characters in name field	
IMPLEMENTATION CONTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:		
OPEN ISSUES:	What should we do if person is not available for picture? Ability to choose a photo from mobile phone library and option to speak name coming in release 2.0.	
CORRESPONDING FORMS AND REPORTS:	Create a Profile Screen	

FORMS

Carrier
4:30 PM
Hindsight
Who are you thinking of today?
Type or Speak a Name or Location
People Near You
Create a Profile
Carrier
4:30 PM
Create a Profile
Select a Relationship to You
Family
Friend
Acquaintance
Take a New Picture
Choose from Photo Library
Please enter his or her name:
John Angus McPhee
What do you know about this person?
John (born March 8, 1931) is an American writer, widely considered one of the pioneers of creative nonfiction. He is a four-time finalist for the Pulitzer
Carrier
4:30 PM
Johannesburg
Ewbank
Google
Map data ©2009 AND
People Near You
Your friend John is nearby, Mr. Reed!
You met John 19 years ago when he helped you correct your golf swing.
John is a golf pro from your old course.

*Note: Certain features displayed on forms are not yet available and will be offered on version 2.0 that will be released at a later date. Further detail is discussed in the Use Case Narratives under "Open Issues".

OPTIONAL MATERIAL:

STATEMENT OF WORK

Complete Total Package — Prepared October 1, 2013

Statement of Work

Project name:	Hindsight App
CTP Project Manager:	Armand Link, Becki Meinhold, Peter Mella, Andrew Riecke, Sloan Tison
Customer:	Marketing
Project Sponsor:	Andrea Houston
Project Start/End (Projected):	10/1/13-4/1/14

CTP Development Staff Estimates (man-months):

Programmers:	2.0
Jr. Analysts:	1.2
Sr. Analysts:	0.6
Supervisors:	0.2
Consultants:	2.0
Total:	6.0

Project Description

Goal:

This application will implement a database to keep track of a large amount of profiles accessible at a moment's notice to the user. The purpose of this application is to help give the user a way of referencing names and relationships during the intermediate stages of Alzheimer's.

Objectives:

· Provide a reliable reference source

· Minimize errors or crashes of application

· Make application user friendly

Phases of Work:

The following tasks and deliverables reflect the current understanding of the project:

· Planning:

- Have a fully functional application by 11/1/13
- Release to the public on 11/21/13

· Analysis:

- Have a description of the app and where problems or opportunities might arise with a recommendation on how to fix them by 10/25/13

· Design:

- Be able to show specifications of all functional and technical specifications by 10/6/13

· Implementation:

- Have a full training program installed in the application software and make sure it is user friendly by 11/1/13

· Maintenance:

- Begin to work on new versions and software updates for the application by 11/21/13

Physical Deliverables:

Milestone 1 – October 2, 2013

Milestone 2 – October 22, 2013

Milestone 3 – November 14, 2013

RESULTS OF RESEARCH

Team CTP sent out a survey to smartphone users with the following description of the application and a couple of simple questions:

This application will be designed to provide Alzheimer's patients with an electronic rolodex of friends and family to aid them in recalling relationships. The app will serve three critical functions. Profiles will be stored containing names, a picture, and important information including the connection to the patient as well as list connections among profiles. Creating a profile can be done one of two ways. The user can manually fill out the profile or use the auto fill feature. Using a name, the auto fill feature will search social media and automatically fill a profile for that name. Finally, this information can be summoned and displayed by either text query, voice command search, or facial recognition via the phone camera.

Do you know someone who has been affected by Alzheimer's?	Would you consider using this application for yourself or someone else?	How useful would you say this application is?	How likely would you be willing to recommend this app to a family member or friend?	What features do you like about the application?	How would you improve this application?
No	Yes	9	9	The feature that I like the most about this application is that it can locate the other app users and make locating people easier.	I would make the app a little more clear, and easy to understand.
Yes	Yes	10	9	The geographical services.	Link to doctors
Yes	Yes	9	9	The creating a profile with your voice function.	I would change the name to make it more appealing.
Yes	Yes	10	10	I like the GPS feature that alerts the user before they are about to meet somebody	I think it would be good to add a feature that called the person before they ran into somebody they knew. That way they definitely would not miss the alert

ACTOR AND USE CASE GLOSSARIES

ACTOR GLOSSARY

Actor	Synonym	Description
User	Alzheimer's patients	The person that uses the application
Camera	Application	Hardware device on mobile phone that takes photographs
GPS	Location Services	Hardware on mobile phone that determines locations

USE CASE GLOSSARY

Use Case Name	Description	Actors
Locate profile by name	The use case describes the event of an Alzheimer's patient speaking or manually entering a name to display a profile.	**User**
Locate profile by location	The use case describes the event of an Alzheimer's patient searching for and receiving notifications of profiles within .10 mile radius, and displaying profiles on a map.	**User, GPS**
Create a profile	The use case describes the event of an Alzheimer's patient creating a profile by entering personal data, including picture entered via camera.	**User, Camera**